AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1-8. (Canceled)

9. (New) A mixing device, in particular for use as a continuously working reactor, comprising:

at least two rotating shafts (11, 14), wherein at least two opposite rows of blades (12a, ..., 13a, ..., 13m) are disposed on each shaft (11, 14) and each row of blades (12a, ..., 13a, ..., 13m) includes at least two individual blades, and that the blades are fastened to the shaft (11, 14) at a fastening point along a shaft diameter (D_W) at an angle of incidents α to a longitudinal axis of the shaft (11, 14), the blades themselves being curved so that the blades (12a, ..., 13a, ..., 13m) exhibit the angle of incidents α at the fastening point on the shaft (11, 14) and an angle of incidents β to the longitudinal axis of the shaft (11, 14) at an outer diameter of the blades (D_A) such that the angle of incidents β at the outer diameter of the blade (D_A) is equal to or less than the angle of incidents α at the shaft diameter (D_W), and that the angle of incidents α continuously decreases from the shaft diameter (D_W) to the angle of incidents β at the outer diameter of the blade (D_A).

10. (New) The mixing device according to claim 1, wherein the outer diameter of the blades (D_A) is twice as large as the shaft diameter (D_W) and the angle of incidents β is approximately half as large as the angle of incidents α.

11. (New) A method for continuously mixing and reacting liquid or solid feed materials with a solid granular heat-transfer medium in a mixing device, the method comprising:

actuating a mixing device comprising at least two rotating shafts, at least two opposite rows of blades are disposed on each shaft, each of the row of blades having at least two individual blades, each of the individual blades being fastened to the shaft at a fastening point along a shaft diameter (D_W) at an angle of incidents α to a longitudinal axis of the shaft, each of the individual blades being curved such that they exhibit an angle of incidents β to the longitudinal axis of the shaft at an outer diameter of the blades (D_A) such that the angle of incidents β at the outer diameter of the blades (D_A) is equal to or less than the angle of incidents α at the shaft diameter (D_W), and that the angle of incidents α continuously decreases from the shaft diameter (D_W) as the diameter increases and reaches the smaller angle of incidents β at the outer diameter of the blade (D_A) such that the axial speed of the liquid or solid feed materials and solid granular heat-transfer medium at the shaft diameter (D_W) is equal to the axial speed of the liquid or solid feed materials and solid granular heat-transfer medium at the outer diameter of the blades (D_A).

12. (New) A method for continuously mixing and reacting liquid or solid feed materials with a solid granular heat-transfer medium in a mixing device, the method comprising:

actuating a mixing device comprising at least two rotating shafts, at least two opposite rows of blades are disposed on each shaft, each of the row of blades having at least two individual blades, each of the individual blades being fastened to the shaft at a fastening point along a shaft diameter (D_W) at an angle of incidents α to a longitudinal axis of the shaft, each of the individual blades being curved such that they exhibit an angle of incidents β to the longitudinal axis of the shaft at an outer diameter of the blades (D_A) such that the angle of incidents β at the outer diameter of the blades (D_A) is equal to or less than the angle of incidents α at the shaft diameter (D_W), and that the angle of incidents α continuously decreases from the shaft diameter (D_W) as the diameter increases and reaches the smaller angle of incidents β at the outer diameter of the blade (D_A) such that the axial speed of the liquid or solid feed materials and solid granular heat-transfer medium at the shaft diameter (D_W) is equal to the axial speed of the liquid or solid feed materials and solid granular heat-transfer medium at the outer diameter of the blades (D_A), wherein the outer diameter of the blades (D_A) is twice as large as the shaft diameter (D_W) and the angle of incidents β is approximately half as large as the angle of incidents α.